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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,650	09/28/2000	John H. Cook III	10003744-1	7966

7590 07/07/2003

AGILENT TECHNOLOGIES  
Legal Department, 51U-PD  
Intellectual Property Administration  
P.O. Box 58043  
Santa Clara, CA 95052-8043

EXAMINER

CHASE, SHELLY A

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 07/07/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/672,650

Applicant(s)

COOK ET AL.

Examiner

Shelly A Chase

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

1. Claims 1 to 9 are presented for examination.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Gearhardt et al. (USP 5701309).

Claim 1:

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**Gearhardt** teaches a method of testing a device under test (DUT) [65] on an automated test equipment digital tester (see fig. 2), the tester comprising the steps of: storing ATE test vectors on hard disk [100] and applying the ATE test pattern for testing the DUT (see col. 5, lines 1 to 5 and col. 52 to 65). Gearhardt also teaches during the scan test comparator logic [30] compares data read out of the DUT with data stored on the hard disk [29] (see col. 5, lines 40 to 56).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gearhardt et al. in view of Kawaguchi et al. (USP 4788684).

As per claims 2 and 3, Gearhardt does not specifically teach the same sequence of transmit vectors is an instance of that sequence and is a separate instance of that sequence; however, Kawaguchi in an analogous art discloses a memory testing apparatus comprising: a master timing generator [13] generating test cycle signals and a delayed test cycle signal (see col. 5, lines 47 to 66). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the testing apparatus of Gearhardt to include the timing generator producing a delayed test cycle as taught by Kawaguchi since, Kawaguchi teaches utilizing a timing

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generator increases test efficiency (see col. 1, lines 55 to 66). This modification would have been obvious because a person of ordinary skill in the art would have been motivated to employ a timing device to increase testing efficiency.

7. Claims **4** to **9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gearhardt et al. in view of Sato (USP 5790559).

As per claims **4** to **7**, Gearhardt does not specifically teach the working memory is a selectable portion of an interior test memory within the memory tester, interleaving work memory transactions among banks of DRAM and storing comparison result from step (b) in an error catch memory; however, Sato in an analogous art teaches a memory testing apparatus comprising: a failure analysis memory (work memory") including a DRAM [7] and a FIFO memory [4] wherein the DRAM stores data received from pattern generator (see col. 11, lines 5 to 11). Sato also teaches (**claim 5**) that the failure memory is a plurality of interleaved banks of DRAM (see fig. 9 and col. 6, lines 37 to 55); interpreted as "interleaving work memory transactions among banks of DRAM."

Saito further teaches (**claim 6**) that the failure memory includes a FIFO memory for storing the result of the comparison (see col. 11, lines 14 to 18) and the FIFO memory is part of the interleaved banks of DRAM (**claim 7**) interpreted as "interleaving error catch memory transactions among banks of DRAM. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hard disk of Gearhardt to include a failure memory that is an interleaved

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banks of DRAM and includes a DRAM [7] and a FIFO [4] as taught by Sato since Sato teaches a failure memory utilizing banks of DRAM provides better test timing (see col. 8 lines 43 to 50). . This modification would have been obvious because a person of ordinary skill in the art would have been motivated to employ a failure memory compatible with the timing required to effectively test a memory device.

As per claims 8 and 9, Gearhardt does not specifically teach the interior test memory comprises of a plurality of memory sets and storing the comparison results in an error catch memory that is a portion of a memory set different than the memory set of which the work memory is a segment; however, Sato teaches a failure analysis memory including a DRAM [7] storing data, a FIFO memory [4] storing data and the failure analysis memory is accessed based on addresses selected by an address selector (see col. 13, lines 36 to 55); interpreted as "the interior test memory is composed of a plurality of sets and the selectable portion is a segment of a memory set."

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hard disk of Gearhardt to include a failure analysis memory wherein an address selector selects a specified location to store data and comparison results. This modification would have been obvious because a person of ordinary skill in the art would have been motivated to utilize a failure analysis memory including a segment to store data and a segment to store comparison results in order to reduce cost and hardware associated with storing data when testing a memory device.

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***Conclusion***

**8. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

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(703) 746-7239, (for Official or Formal communications)

**Or:**

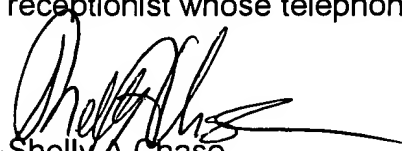
(703) 746-7240, (for Non-Official or Informal or "DRAFT"

communications)

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA.,

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A Chase whose telephone number is 703-308-7246. The examiner can normally be reached on Mon-Thur from 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

  
Shelly A Chase  
June 29, 2003